Remarks/Arguments

This Amendment is responsive to the Office Action of May 16, 2005.

In the recent Office Action, the Examiner rejected claims 47 and 49-50 under 35 U.S.C. §102(b) as being allegedly "anticipated" by Eijkelenboom *et al.* (U.S. Pat. No. 4,039,878). Here, the Examiner said:

> "As to claim 47, Eijkelenboom et al (US 4039878) discloses an electric reflector lamp comprising an elliptical reflector for use with a hyperbolic reflector, where the foci of the elliptical reflector and the hyperbolic reflector coincide. It is inherent that both reflectors, the elliptical and hyperbolic, will have two focal points, as this is a property of all reflectors with hyperbolic or elliptical geometry.
>
> As to claims 49 and 50, Eijkelenboom et al (US 4039878) teaches that the above mentioned elliptical and hyperbolic reflectors consist of a transparent body (of which the plastic spoken of in claim 49 would certainly qualify) coated with a reflecting layer (column 3 liens 1-4 and 12-14). As well, Eijkelenboom et al (US 4039878) illustrates that the elliptical and hyperbolic reflectors previously mentioned are integral, as shown by Figure 1."

In addition, the Examiner rejected claim 48 under 35 U.S.C. §103(a) as having been allegedly "obvious" over Eijkelenboom *et al.* Here, the Examiner said:

> "Speaking to claim 48, at the point where the above-mentioned foci coincide, a light source, comprising a filament, is placed so that the light source surrounds the coinciding foci. Therefore the filament is placed at the focal point of both the hyperbolic reflector and the elliptical reflector (column 1 lines 1-14). Normally, the filament by itself cannot serve as a focusing element; however, this filament is analogous to the 'focusing element' mentioned in claim 48, since it would be obvious to include a glass bulb that surrounds the filament. In this case, it is the glass bulb that can act as the 'focusing element' of claim 48. Addition of a glass bulb to surround a filament is common practice in the art, as it lends additional strength and stability to the light source, in addition to extending the life of the filament itself."

The Examiner indicated that claims 1-46 were allowable over the prior art. Here, the Examiner said:

> "The prior art does not disclose, nor reasonably suggest a fiber optic rotary joint comprising an elliptical reflector, a hyperbolic reflector, or a combination of the two reflectors, where they are arranged such that the focal points of the two reflectors are coincident. Furthermore, the prior art does not disclose the use of a slip ring, optical source, coupler, detector, or splitter with the device as described above. Therefore, its is the examiner's opinion that claims 1-46 have exhibited novelty over the prior art, and are thereby allowable."

In response to the foregoing, certain of allowed claims 1-46 have been further amended in the minor ways to improve grammar, sentence structure and readability. In addition, claim 47 has been further amended to add that the reflector assembly is to be used in a fiber optic rotary joint, as discussed *infra*. For the Examiner's convenience, Applicant's attorney will discuss the various changes to the claims seriatim herebelow:

Claim 1: Claim 1 has been amended in a minor way to delete the word "one" as being unnecessary and to change the language "said elliptical reflector comprising a reflective surface shaped to define a portion of an ellipse" to -- said elliptical reflector comprising a reflective surface configured as a portion of an ellipse --. It is felt that this language is improved over that which had been original been employed. In addition, "elliptically shaped" has been hyphenated.

Claim 2: Changes to claim 2 are minor, and are self-explanatory. The word "hyperbolically shaped" has been hyphenated.

Claim 6: The changes to claim 6 are perfunctory, and are self-explanatory.

Claim 8: The changes to claim 8 are self-explanatory and are of a perfunctory nature. The compound word "circumferentially spaced" has been hyphenated.

Claim 9: The changes to claim 9 are perfunctory, and are self-explanatory.

Claim 10: The changes to claim 10 are perfunctory, and are self-explanatory.

Claim 11: Claim 11 has been amended in a minor way to specify "a plurality of detectors for receiving optical signals having respective wavelengths", rather than "a plurality of detectors for receiving optical signals having a respect wavelengths". This correction is believed to be self-explanatory, and warrants no further discussion.

Claim 12: The changes to claim 12 are perfunctory.

Claim 14: The changes to claim 14 are believed to be perfunctory. In addition, the word "one" has been deleted as being unnecessary.

Claim 15: The changes are perfunctory, and warrant no further discussion.

Claim 16: In claim 16, the word "circumferentially spaced" has been hyphenated.

Claim 17: The changes to claim 17 are minor. It should be noted that claim 17 now specifies the inclusion of a "hyperbolic reflector comprising a reflective surface configured as a portion of a "hyperbola", rather than having "a reflective surface shaped to define a portion of hyperbola". This language is believed to be more apt. In addition, the word "hyperbolically shaped" has been hyphenated.

Claim 20: The changes to claim 20 are believed to be minor, and self-explanatory. Here again, the expression "comprising a reflective surface shaped to define a portion of an ellipse" has been changed to -- a reflective surface configured as a portion of an

ellipse --, this being more apt. In addition, "elliptically shaped" has been hyphenated.

Claim 26: The changes to claim 26 are minor, and parallel to changes previously made to claim 11.

Claim 29: The changes to claim 29 are believed to be self-explanatory.

Claim 30: The changes to claim 30 are believed to be perfunctory, and self-explanatory.

Claim 32: The changes to claim 32 are also believed to be minor and insignificant. The word "one" has been deleted as being simply unnecessary.

Claim 33: Claim 33 has been amended to specify that the reflective surface is "configured as", rather than "shaped to define" a portion of an ellipse, as discussed above. This language is believed to be more apt.

Claim 35: Claim 35 has been amended in a minor way to also specify that the reflective surface is "configured as", rather than "shaped to define" a portion of a hyperbola.

Claim 37: Claim 37 has been amended in a minor way to specify that the reflective surface is "configured as", rather than "shaped to define" a portion of a hyperbola.

Claim 38: The changes to claim 38 are believed to be perfunctory, and self-explanatory.

Claim 39: The changes to claim 39 are believed to be perfunctory, and self-explanatory.

Claim 40: The changes to claim 40 are believed to be perfunctory, and self-explanatory.

Claim 41: The changes to claim 41 are believed to be minor, and generally parallel the changes to claim 11, discussed above.

Claim 44: Claim 44 has been amended in a perfunctory manner, and the changes should be self-explanatory.

Claim 45: Claim 45 has been amended in a perfunctory way, and the changes should be self-explanatory.

Claim 46: Claim 46 has been amended in a minor way. More particularly, the compound word "circumferentially spaced" has been hyphenated.

Claim 47: Independent claim 47 has been amended to specify that the invention is a reflector assembly for use in a fiber optic rotary joint for providing optical communication between a rotor and a stator, the rotary joint including a optical source carried by one of the rotor and stator for transmitting optical signals to the other of the rotor and stator. The reflective assembly then includes an elliptical reflector and a hyperbolic reflector. Claim 47 is generally similar to claims 1-3. However, claim 47 is directed to a "reflector assembly", whereas claims 1-3 are directed to a fiber optic rotary joint. As claim 47 has now been expanded, Applicant's attorney would respectfully submit that claim 47 is directed to a subcombination (*i.e.*, a reflector assembly) for use in a combination (*i.e.*, a fiber optic rotary joint). The cited reference Eijkelenboom, simply discloses an electric reflector lamp having a hyperbolic reflector and an elliptical reflector. However, this is simply a lamp, and is not a reflector assembly for use in a fiber optic rotary joint. Hence, claim 47 is, as now amended, is now believed to be allowable for the same reasons as claims 1-3.

Claim 48: Claim 47 has been amended in a minor way, and the changes thereto are believed to be self-explanatory.

Thus, this action is believed to improve the grammar, language and readability of allowed

claims 1-46, and to also place claims 47-50 in condition for allowance.

This Amendment is believed to be fully responsive to the Office Action of May 16, 2005; is believed to squarely address each and every ground for objection or rejection raised by the Examiner; and is further believed to material advance the prosecution of this application toward immediate allowance.

Formal allowance of claims 1-50, as amended, is courteously solicited.

Respectfully submitted,

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CERTIFICATE OF FACSIMILE TRANSMISSION

I certify that this correspondence is being forwarded to the United States Patent and Trademark Office by facsimile transmission to (703) 872-9306 on July 27, 2005.

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